

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-19. Cancelled

20. (Currently amended) A method for regeneration of articular cartilage comprising administering to an area in need of regeneration of said articular cartilage an osteochondral graft having applied thereto a composition consisting essentially of an amount of a heterodimer effective for the regeneration of articular cartilage, wherein the heterodimer comprises one purified bone morphogenetic protein (BMP) selected from the group consisting of BMP-2, 4, 5, 6, and 7 and one protein which induces the formation of tendon or ligament tissue selected from the group consisting of BMP-12, BMP-13, and MP52.

21. (Previously presented) The method of claim 20, wherein said BMP is BMP-2.

22. Cancelled.

23. (Currently amended) A method for regeneration of articular cartilage comprising administering to an area in need of regeneration of said articular cartilage an osteochondral graft having applied thereto a composition consisting essentially of

(i) an amount of at least one purified bone morphogenetic protein (BMP) selected from the group consisting of BMP-2, 4, 5, 6, and 7 effective for the regeneration of said articular cartilage and

(ii) one or more pharmaceutical carriers.

24. (Previously presented) The method of claim 23, wherein said pharmaceutical carrier is hyaluronic acid.

25. (Previously presented) The method of claim 23, wherein the pharmaceutical carrier is a mineral.

26. (Previously presented) The method of claim 25, wherein said mineral is calcium phosphate.

27. (Previously presented) The method of claim 23, wherein said pharmaceutical carrier is a ceramic.

28. (Previously presented) The method of claim 27, wherein said ceramic is hydroxyapatite.

29. (Currently amended) A method for regeneration of articular cartilage comprising administering to an area in need of regeneration of said articular cartilage an osteochondral graft and a composition consisting essentially of an amount of at least one purified bone morphogenetic protein (BMP) selected from the group consisting of BMP-2, 4, 5, 6, and 7 effective for the regeneration of said articular cartilage, wherein said composition is applied directly to the osteochondral graft and/or administered directly to the site in need of tissue repair in conjunction with the graft.

30. (Previously presented) The method of claim 29, wherein said composition is applied to the graft or the site in need of tissue repair using a syringe for injection.

31. (Currently amended) A method for regeneration of articular cartilage comprising administering to an area in need of regeneration of said articular cartilage an osteochondral graft having applied thereto a composition consisting essentially of an amount of at least one purified bone morphogenetic protein (BMP) selected from the

group consisting of BMP-2, 4, 5, 6, and 7 effective for the regeneration of said articular cartilage, wherein the area in need of regeneration of said articular cartilage is selected from the group consisting of the hip and the knee.

32. (Previously presented) The method of claim 31, wherein the area in need of regeneration of said articular cartilage is the hip.

33. (Previously presented) The method of claim 31, wherein the area in need of regeneration of said articular cartilage is the knee.

34. (Previously presented) The method of claim 33, wherein the area in need of regeneration of articular cartilage is the trochlear groove.

35. (Previously presented) The method of claim 33, wherein the area in need of regeneration of articular cartilage is the femoral condyle.

36. (Previously presented) The method of claim 35, wherein the area in need of regeneration of articular cartilage is the medial femoral condyle.

37. (Previously presented) The method of claim 35, wherein the area in need of regeneration of articular cartilage is the lateral femoral condyle.

38. (Previously presented) The method of claim 23, wherein the BMP is BMP-2.